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IS 4526 (1976): 2, 5-dichloroaniline [PCD 9: Organic Chemicals Alcohols and Allied Products and Dye Intermediates]



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IS : 4526 - 1976

Indian Standard
SPECIFICATION FOR
2, 5-DICHLOROANILINE
(*First Revision*)

UDC 667·281/·285 : 547·551·51



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SPECIFICATION FOR 2, 5-DICHLOROANILINE

(First Revision)

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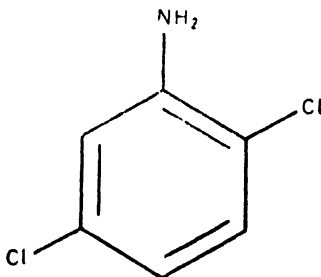
SPECIFICATION FOR 2, 5-DICHLOROANILINE

(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 29 July 1976, after the draft finalized by the Dye Intermediates Sectional Committee had been approved by the Chemical Division Council.

0.2 2, 5-Dichloroaniline ($C_6H_5Cl_2N$) is used as a diazo component in the manufacture of dyestuffs of the azo series. It has the following structural formula:



2, 5-DICHLOROANILINE
(Molecular Mass 162)

0.3 This standard was first issued in 1968. In this revised version, limit for crystallizing point has been modified. For methods of test for 2, 5-dichloroaniline, reference has been made to IS : 5299-1969*.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Methods of sampling and tests for dye intermediates.

†Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for 2, 5-dichloroaniline.

2. REQUIREMENTS

2.1 Description — The material shall be in the form of light brown crystals or fused solid.

2.2 The material shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR 2, 5-DICHLOROANILINE

| SL No. | CHARACTERISTIC | REQUIREMENT | METHOD OF TEST, REF TO CL No. IN | |
|-----------|--|--------------|-------------------------------------|------|
| | | | Appendix A IS : 5299-1969* | |
| (1) | (2) | (3) | (4) | (5) |
| i) | Crystallizing point, °C, <i>Min</i> | 47·8 | — | 7 |
| ii) | Assay, percent by mass, <i>Min</i> | 98·0 | — | 12·1 |
| iii) | Moisture, percent by mass, <i>Max</i> | 1·0 | — | 9·1 |
| iv) | Nitro compounds | To pass test | A-2 | — |

NOTE — Use *prepared sample* (see A-1.1) for assay and for the determination of crystallizing point.

*Methods of sampling and tests for dye intermediates.

3. PACKING AND MARKING

3.1 Packing — The material shall be packed in steel drums (see IS : 2552-1970*) lined with suitable polyethylene film or as agreed to between the purchaser and the supplier.

3.2 Marking — Each container shall be securely closed and shall bear legibly and indelibly the following information:

- Name of the material;
- Name of the manufacturer and his recognized trade-mark, if any;
- Tare, net and gross mass; and
- Batch number.

*Specification for steel drums (galvanized and ungalvanized) (*first revision*).

3.2.1 The containers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in 3 of IS : 5299-1969*.

4.2 Number of Tests

4.2.1 Tests for the determination of crystallizing point and assay shall be conducted on each of the individual samples.

4.2.2 Tests for the determination of remaining characteristics, namely, moisture and nitro compounds shall be conducted on the composite sample.

4.3 Criteria for Conformity

4.3.1 For Individual Samples — The lot shall be declared as conforming to the requirements of assay and crystallizing point of each if the individual test results satisfies the relevant requirements given in Table 1.

4.3.2 For Composite Sample — For declaring the conformity of the lot to the requirements of all other characteristics tested on the composite sample (*see* 4.2.2), the test results for each of the characteristics shall satisfy the relevant requirements given in Table 1.

5. TEST METHODS

5.1 Tests shall be carried out according to the methods prescribed in Appendix A, and IS : 5299-1969* as indicated in col 4 and 5 of Table 1.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1960†) shall be employed in tests.

NOTE — ' Pure chemicals ' shall mean chemicals that do not contain impurities which affect the results of analysis.

*Methods of sampling and tests for dye intermediates.

†Specification for water, distilled quality (*revised*).

APPENDIX A

(Table 1, and Clause 5.1)

METHODS OF TEST FOR 2, 5-DICHLOROANILINE

A-1. SAMPLE FOR TEST

A-1.1 Melt about 50 g of the material and maintain at a temperature of 50°C. Add sodium sulphate and after 15 minutes decant the material. This *prepared sample* shall be used for assay and for the determination of crystallizing point.

A-2. TEST FOR NITRO COMPOUNDS

A-2.0 Outline of the Method—The presence of nitro compounds is detected by observing the solubility of the material in hydrochloric acid in which nitro compounds are insoluble.

A-2.1 Reagents

A-2.1.1 Dilute Hydrochloric Acid—10 percent (*m/v*) prepared by diluting concentrated hydrochloric acid (*see* IS : 265-1962*).

A-2.2 Procedure—Weigh accurately about 2 g of the material and add 200 ml of hydrochloric acid. Stir to dissolve completely. Warm if necessary.

A-2.2.1 The material shall be taken to have passed the test if only a slight opalescence is observed.

*Specification for hydrochloric acid (*revised*).

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**AMENDMENT NO. 1 MAY 2002
TO
IS 4526 : 1976 SPECIFICATION FOR
2, 5-DICHLOROANILINE
(First Revision)**

(*Page 3, clause 0.2, Structural Formula*) — Insert the following below the structural formula:

‘(CAS No. 95-82-9).’

[*Page 4, Table 1, Sl No. (iv)*] — Inesert the following after Sl No. (iv):

| (1) | (2) | (3) | (4) |
|-----|--|-----|--------------------------------------|
| v) | Matter insoluble in methanol, percent by mass, <i>Max</i> | 0.2 | when tested as per IS 5299 : 2001 |

(PCD 11)

Reprography Unit, BIS, New Delhi, India